

MINING APPLICATION
NO. _____
Date _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN
(Other forms may be used in lieu of MR 2, provided
they contain the same information)

1. Name of Applicant or Company TOSCO DEVELOPMENT CORPORATION
2. Proposed type of operation Shaft excavation & underground mining
3. (a) Prior Land Use(s) Oil & Gas production; mining (gilsonite)
limited winter sheep grazing
(b) Current Land Use(s) Oil & gas production; winter sheep grazing
(c) Possible or Prospective Future Land Use(s) same as current; oil shale
production
4. What vegetation exists on the land proposed to be affected _____
Mixed desert shrubland, matscale shrubland, non-vegetated area plant communities
(a) Types and Estimated Percent cover or density: _____
overall cover ranges from 8-20 percent (see Section 2.6.1)
5. What is the pH range of soil before mining? approx. 7.9-9.4 pH
Name of Person or Agency and method of determining pH _____
Soil Conservation Service; field analysis using litmus paper.
6. Site elevation above sea level 5050-5100 feet m.s.l.
7. In case of coal, oil shale, and bituminous sandstone:
Principal seam(s) and thickness(es) Mahogany Zone of Green River Formation; 89 ft.
8. Estimated duration of mining operations Shaft excavation; 20 months;
Mining: 36 months.
9. Has overburden, waste or rejected materials been classified as acid or
alkali producing? () Yes (X) No
Does the above material being moved have any other characteristics
affecting revegetation? NO
10. Will any underground workings or aquifers be encountered? (X) Yes () No
Describe Birds Nest aquifer at depth of approx. 1650 feet (see Section 2.5.2)
Is there an active discharge of water from abandoned deep mines on or
crossing the land affected? () Yes (X) No If yes, describe
the quality of water being discharged. _____

11. Describe specifically a detailed procedure for: See:
- (a) The mining sequence Section 3.3
 - (b) The procedure for constructing and maintaining access roads, to include a typical cross-section and a profile of the proposed road grades. Section 3.4.3
 - (c) The procedure for site preparation including removing trees and brush. Section 3.1
 - (d) The method for removing and stockpiling topsoil or disturbed materials. Section 3.1 and 3.4.1
 - (e) The method for the placement or containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic materials. Section 4.0 and 5.0
 - (f) A procedure for final stabilization of disturbed materials. Section 5.2

GRADING AND REGRADING

Specifically describe: See

- (a) Typical cross-section of regrading. Figure 5.2-1
- (b) The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material. Section 5.2 6" over whole area
- (c) What type of soil treatment will be utilized. Section 5.2
- (d) The method of drainage control for the final regraded area. Section 5.2
- (e) Maximum grading slope. Figure 5.2-1

TESTING

1. Describe method for testing stability of reclamation fill material. No fill material will be required. Coarse ore material will be disposed of at the angle of repose. No further testing for stability of the coarse ore material is planned.
Describe method for the testing of soil that is intended to support vegetation Soils will be laboratory tested for determination of standard soil testing parameters including SAR, pH, CEC, EC, N, K, P and texture.
2. Describe any soil treatment employed as an aid to revegetation _____
70#/acre nitrogen; 200#/acre phosphorus (estimate)
3. Describe surface preparation of areas intended to support vegetation:
Reclamation sites will be graded and shaped to blend with existing
land forms, then ripped or disked in preparation for the seedbed.

REVEGETATION

1. Revegetation to be completed by:
- | | |
|---|--|
| <input checked="" type="checkbox"/> Operator | <input type="checkbox"/> Hydroseeding |
| <input type="checkbox"/> Soil Conservation District | <input type="checkbox"/> Aerial Seeding |
| <input type="checkbox"/> Private Contractor | <input type="checkbox"/> Conventional or Rangeland Drill |
| <input type="checkbox"/> Other (specify) _____ | <input type="checkbox"/> Broadcast and Drag |
| | <input type="checkbox"/> Other _____ |

2. Will Mulch be used? (X) Yes () No

Type: Straw Rate/Acre 3,000 - 4,000 lbs.

3. Revegetation Plan and Schedule -

	Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be replanted
Grass	Hilaria jamesii	30#/acre live seed	all disturbed areas	all aspects	Autumn
Grass	Sporobolus cryptandrus	"	"	"	"
Grass	Oryopsis hymenoides	"	"	"	"
Grass	Sporobolus airoides	"	"	"	"
Shrub	Atriplex canescens	"	"	"	"

CONTINUED ON ATTACHMENT

4. Will affected area be subject to livestock or wildlife grazing?

(X) Yes () No Will vegetation protection be needed? Revegetation
activities will be monitored and fencing will be used where necessary to provide
protection from grazing pressure.

5. Will irrigation be used: (X) Yes () No Type Section 5.3.5

6. Describe maintenance procedures for revegetation if needed, until surety release is granted.

During the peak and at the end of the growing season,
productivity, density, cover, frequency, and species diversity will be measured.
Additional planting, fertilization and watering will be used to maintain
adequate growing conditions. Section 5.3.6

ATTACHMENT

Revegetation Plan and Schedule

	Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be Replanted
Grass	Agropyron smithii	30#/acre live seed	all disturbed areas	all aspects	Autumn
Grass	Bouteloua gracilis	"	"	"	"
Shrub	Atriplex canescens	"	"	"	"
Shrub	Atriplex confertifolia				
Shrub	Atriplex cuneata	30#/acre live seed	all disturbed areas	all aspects	Autumn
Shrub	Chrysothamnus nauseosus	"	"	"	"

STATE OF COLORADO

COUNTY OF DENVER

I, GEORGE C. KANE, having been duly sworn
depose and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the Applicant and this
application has been executed as required by law.

Signed: George C. Kane

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 28th day of December, 19 81.

Notary Public: Frank P. Chatham

My Commission Expires: My Commission Expires March 9, 1983

TOSCO CORP.
SUITE 1150
1600 BROADWAY
DENVER, COLORADO 80202

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as
follows:

"Information relating to the location, size, or nature
of the deposit and marked confidential by the operator,
shall be protected as confidential information by the
Board and the Division and not be a matter of public
record in the absence of a written release from the
operator, or until the mining operation has been
terminated as provided in subsection (2) of section
40-8-21."

Is confidential information contained herein?

YES _____ (Initial)

NO _____ (Initial)

Sections desired to be maintained as confidential information -

Mine: SAND WASH
Company: TOSCO DEVELOPMENT
CORPORATION
File No: _____
Representative: John Hardaway /
Anthony Rampton (Utah - SLC)
Address: 1600 Broadway
Suite 1400
Denver, CO. 80202

Division of Oil, gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Commitment to Rule M-10

Gentlemen:

I hereby commit the applicant to comply with Rule M-10, "Reclamation standards" in its entirety, as adopted by the Board of Oil, Gas, and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined from Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

<u>Rule</u>	<u>Category of Commitment</u>
M-10(1)	Land Use
M-10(2)	Public Safety and Welfare
M-10(3)	Impoundments
M-10(4)	Slopes
M-10(5)	Highwalls
M-10(6)	Toxic Materials
M-10(7)	Roads and Pads
M-10(8)	Drainages
M-10(9)	Structures and Equipment
M-10(10)	Shafts and Portals
M-10(11)	Sediment Control
M-10(12)	Revegetation
M-10(13)	Dams
M-10(14)	Soils

I believe a variance is justified on a site-specific basis for the following subsections of Rule M-10 for reclamation on this mine and have enclosed as an attachment to this letter a narrative statement setting forth a description of the extent of the variance request and factual reasons for said variance request.

<u>Rule</u>	<u>Category of Variance Request</u> (Narrative Attached)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

STATE OF COLORADO

COUNTY OF DENVER

I, GEORGE C. KANE, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: George C. Kane

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 28th day of December, 1981.

Notary Public:

Frank L. Clendenen

My Commission Expires: My Commission Expires March 9, 1989

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